

others belonging to the Smithsonian Institution, kindly sent me by Prof. Baird for examination; three have their bills 1 1-16 in. in length—all have the bright chestnut coloring above and are conspicuously spotted below, with the legs uniformly deep black. Those killed even towards the end of July retain the chestnut color above and the spots on the under plumage, whereas at that time *E. pusillus* has scarcely any rufous coloring above, and is below entirely destitute of spots, with a wash of a light tawny color on the upper part of the breast.

Mr. E. Coues suspected probably that more than one species existed in North America, for in his able Monograph of the Tringæ, published in the Proc. of the Phil. Acad. of Sci., 1861, p. 177, in a note under *E. pusillus*, he says, "I am by no means satisfied that but a single species of *Ereunetes* exists in N. A. The difference in size, in length and proportions of the tarsus even, and especially in the bill, cause it to seem almost impossible that all the specimens before me are specifically the same," &c.

He however made no positive determination of there being more than one species. See his remarks in the note referred to above.

I have had specimens of the so-called *E. mauri* sent me from Cuba by Dr. Gundlach for examination, and have found it to agree precisely with examples of *pusillus* from the Atlantic coast.

Descriptions of six New Species of UNIONIDÆ from Lake Nyassa, Central Africa, &c.

BY ISAAC LEA.

The specimens herein described are of unusual interest. They are the first which I have seen from Central Africa, and I am greatly indebted for them to the liberality of John Kirk, M. D., of Edinburgh, who accompanied the Zambezi Expedition, under the British Government, as Medical Officer and Botanist. There are six in number, all of which I believe to be undescribed. The three *Spathæ* have the peculiar African type, and probably were furnished with siphons. In one of the species we have, for the first time, an *alate* type. The three *Uniones* differ from any type I have heretofore seen from Africa, and they take more of that of India in the subtriangular form—*Rajahensis*, (nobis,) for instance—and in the subuplicate character of some of our southern species—inclining to nodulous. It is greatly to be regretted that none of the soft parts were preserved, that we might compare their anatomy with those from America. Lake Nyassa is one of the three great central lakes of Africa, and has a southern drainage in the Zambezi River. It is, in extent, as Dr. Kirk informs me by letter, "exceeding two hundred miles north and south, and from fifteen to sixty miles wide, and is fifteen hundred feet above the sea. It lies between the parallels of 14° and 18° south latitude.

UNIO KIRKII.—Testâ plicatâ, triangulari, subinflatâ, ad latere planulatâ, inæquilaterali, anticè rotundatâ, posticè angulatâ; valvulis crassis, anticè crassioribus; natibus valdè prominentibus, solidis, ad apices undulatis; epidermide viridî, radiis capillaris indutâ; dentibus cardinalibus crassis, sulcatis; laterali-bus subrectis, curtis, crassis, in valvulo sinistro tripartitis; margaritâ argenteâ et iridescente.

Hab.—Lake Nyassa, Central Africa. John Kirk, M. D., of the Zambezi Expedition.

UNIO NYASSAENSIS.—Testâ plicatâ, triangulari, subinflatâ, ad latere planulatâ, inæquilaterali, anticè rotundatâ, posticè angulatâ; valvulis subcrassis, anticè crassioribus; natibus prominentibus, solidis, ad apices undulatis; epidermide luteo-corneâ, obsolete radiatâ; dentibus cardinalibus parviusculis, sulcatis; laterali-bus subrectis, curtis, crassis, in utroque valvulo duplicibus; margaritâ salmonis colore tinctâ et iridescente.

[April,

Hab.—Lake Nyassa, Central Africa. John Kirk, M. D., of the Zambezi Expedition.

UNIO AFERULA.—Testâ valdè plicatâ, obliquâ, subcompressâ, valdè inæquilaterali, anticè rotundâ, posticè subbiangulatâ; valvulis crassiusculis, anticè crassioribus; natibus subprominentibus, solidis, ad apices undulatis; epidermide luteo-corneâ; dentibus cardinalibus parviusculis, sulcatis; lateralibus subrectis, curvis, in utroque valvulo duplicibus; margaritâ dilutè salmonis colore tinctâ et valdè iridescente.

Hab.—Lake Nyassa, Central Africa. John Kirk, M. D., of the Zambezi Expedition.

SPATHA ALATA.—Testâ alatâ, sulcatâ, triangulari, compressâ, valdè inæquilaterali, anticè obliquè rotundatâ, posticè obtusè angulatâ; valvulis crassiusculis; natibus parvis, vix prominulis; epidermide olivaceâ, nitidâ, obsoletè radiatâ; margaritâ purpureâ et valdè iridescente.

Hab.—Lake Nyassa, Central Africa. John Kirk, M. D., of the Zambezi Expedition.

SPATHA NYASSAENSIS.—Testâ subsulcatâ, ellipticâ, lenticulari, compressâ, valdè inæquilaterali, anticè rotundâ, posticè obtusè angulatâ; valvulis crassiusculis; natibus parvis, vix prominulis, ad apices minutè undulatis; epidermide rufo castaneâ vel luteolâ, obsoletè radiatâ; margaritâ purpurecente et valdè iridescente.

Hab.—Lake Nyassa, Central Africa. John Kirk, M. D., of the Zambezi Expedition.

SPATHA MODESTA.—Testâ subsulcatâ, transversâ, subcompressâ, inæquilaterali, posticè et anticè rotundâ; valvulis tenuibus; natibus parvis, prominulis, ad apices minutè undulatis; epidermide tenebroso-olivaceâ, eradiatâ, nitidâ; margaritâ cæruleo-albâ et valdè iridescente.

Hab.—Fresh-waters near Mozambique, Africa. John Kirk, M. D., of the Zambezi Expedition.

Description of six new species of *SUCCINEA* of the United States.

BY ISAAC LEA.

S. HALEANA.—Testâ obliquo-ovatâ, nitidâ, subdiaphanâ, aureâ, tenui; spirâ brevi; suturis impressis; anfractibus ternis, convexis; aperturâ grandî, lato-ovatâ; labro regulariter expanso; columellâ incurvâ.

Hab.—Alexandria, Louisiana, J. Hale, M. D.

S. GROSVENORII.—Testâ obliquo-ovatâ, striatâ, subdiaphanâ, stramineâ, tenui; spirâ exsertâ; suturis valdè impressis; anfractibus quaternis, convexis; aperturâ subrotundâ, grandiusculâ; labro expanso; columellâ incurvâ et contortâ.

Hab.—Santa Rita Valley, Kansas? Mr. H. C. Grosvenor; and Alexandria, Louisiana, J. Hale, M. D.

S. MOORESIANA.—Testâ obliquo-ovatâ, minutè striatâ, opacâ, albidâ, sub-tenui; spirâ exsertâ; suturis impressis; anfractibus ternis, convexiusculis; aperturâ subrotundâ; labro subexpanso; columellâ incurvâ et contortâ.

Hab.—Court House Rock, on Platte River, California route, Mr. H. Moores.

S. WILSONI.—Testâ elongato-obliquâ, valdè striatâ, diaphanâ, peraurèâ, subnitidâ, tenui; spirâ valdè exsertâ; suturis valdè impressis; anfractibus quaternis, convexiusculis; aperturâ grandiusculâ, ovatâ; labro subexpanso; columellâ, tenui, incurvâ et contortâ.

Hab.—Near Darien, Georgia, S. W. Wilson, M. D.

S. FORSHEYI.—Testâ elongato-obliquâ, tenui, nitidâ, diaphanâ, subaurèâ, pertenui; spirâ exsertâ, acuminatâ; suturis impressis; anfractibus ternis, 1864.]